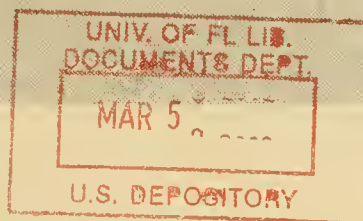


# LABOR SAFETY SERVICE



A REPORT BY THE LABOR MEMBERS  
of the  
NATIONAL COMMITTEE for the  
CONSERVATION of MANPOWER in WAR INDUSTRIES

U. S. DEPARTMENT OF LABOR



DIVISION OF LABOR STANDARDS

LABOR MEMBERS  
of the  
NATIONAL COMMITTEE FOR THE CONSERVATION  
OF MANPOWER IN WAR INDUSTRIES

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JOHN P. COYNE, *President*,  
Building and Construction Trades Department, American Federation of Labor

JOHN P. FREY, *President*,  
Metal Trades Department, American Federation of Labor

CLINTON S. GOLDEN, *Assistant to the President*,  
United Steel Workers of America

HERBERT W. PAYNE, *Vice President*,  
Textile Workers Union of America

ERIC PETERSON, *General Vice President*,  
International Association of Machinists

STANLEY RUTTENBERG,  
Economic Division, Congress of Industrial Organizations

## *Foreward*

Industrial safety is of vital importance to organized labor.

An accident on the job always cuts into a worker's pay envelope; it may reduce his ability to earn a living for the rest of his life; it may mean death. The best compensation law in the country doesn't come anywhere near paying full wages. To the skilled worker, even a "minor" injury can mean the loss of a skill acquired through many years of training and experience; the man who was a skilled mechanic may have to take a job as a watchman--if he can get one.

Now, in wartime, a disabling accident puts the victim on the sidelines, unable to pitch in on the job of defeating enemies who would deprive him of every right he has gained as an American and a union member.

Labor representatives on the National Committee for the Conservation of Manpower in War Industries are calling on workers and their unions all over the country to play a major role in the campaign against work accidents. The Secretary of Labor appointed this Committee to enlist the voluntary services of trained safety men all over the country, and to awaken labor and industry to the special need for industrial safety in the war effort. Implementing the Committee's work are the continuing services of the Division of Labor Standards, United States Department of Labor, which daily works with labor on important safety problems.

In this report the Committee's labor representatives indicate briefly the seriousness of the industrial accident problem, point out specific action unions can take to combat industrial accidents, and show how they can secure assistance in this action.

*Washington, D. C.  
September, 1942*

THE WHITE HOUSE  
WASHINGTON

October 17, 1941

The Honorable

The Secretary of Labor

My dear Miss Perkins:

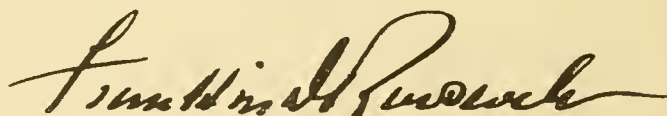
The urgency of our production needs under the defense program cannot help but deepen concern over the disclosure that work accidents in 1940 caused an aggregate time loss of close to one and one half billion man hours.

Aside from the heavy social burden thus inflicted upon workers and their families, and the money loss occasioned to management, this staggering wastage of effective manpower seriously slows up plant output today when quick delivery of equipment and supplies is so vitally essential to our security.

That is why I am gratified to know that under the leadership of your Department, the National Committee for the Conservation of Manpower in Defense Industries is going forward vigorously with a nation-wide program to curtail work accidents. It is reassuring to observe that management and labor are collaborating in an essentially voluntary project, through which a practical safety service is supplied directly and continuously to all contractors engaged on Government orders.

I trust that employers everywhere will cooperate fully with your National Committee, and that every member of our great industrial army will actively participate in a campaign for safety in defense production.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Franklin D. Roosevelt". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.



## FROM THE RECORD-- THE SERIOUSNESS OF INDUSTRIAL ACCIDENTS TO WORKERS

War means death and injury on the production front as well as on the battlefield.

You might expect that accidents would increase at the same rate as employment. But during times of rapid expansion of production, accidents tend to increase much more rapidly than employment. New workers, overcrowded workshops, long hours, pressure for increased output, new chemical processes--all of the developments which have marked our defense and war production efforts--have swelled the flood of industrial accidents.

The number of accidents in 1940 and 1941 compared with those in 1939, the last full year before the National Defense Program, shows what it has cost us in industrial manpower to arm against the Axis:



THE DEAD

1939 . . . .	16,400
1940 . . . .	18,100
1941 . . . .	19,200



THE LAME, THE HALT, AND THE BLIND

1939 . . . .	109,400
1940 . . . .	89,600
1941 . . . .	100,600



THE INCAPACITATED

1939 . . . .	1,477,700
1940 . . . .	1,782,000
1941 . . . .	2,060,400

Every worker is a potential casualty, one of the more than 2 million who are injured every year. And when a worker is injured he faces the risk that he may be one of the thousands who die each year from industrial accidents. When a man is injured at work, the extent of that injury, whether it is a scratch or a lost arm, a serious injury or death, is largely a matter of chance. The only sure protection is to prevent the injury--before it occurs.

Management has the duty of providing a safe workplace. But that alone cannot stop injuries. Labor must cooperate if injuries are to be held down to a minimum. That cooperation means that every man and woman employed must be everlastingly careful to work safely, to follow safety rules, to use protective equipment. It means, too, that he must be alert to dangers which require management attention and see that those dangers are reported to management, either directly or through a procedure established by labor-management agreement. Labor must play an increasingly important part in accident prevention. The services of the National Committee and the U. S. Department of Labor will enable labor to do an effective job.

## HOW LABOR CAN PLAY A MAJOR ROLE IN INDUSTRIAL SAFETY

Safety is simple in principle but requires considerable technical detail in application. Through the U. S. Department of Labor's National Committee and its Division of Labor Standards, safety experts are available to assist local unions in studying hazards and developing safety activity. Here are a few activities which unions might profitably undertake, together with an inkling of how to go about the job.

### CHECKING ON SAFETY CONDITIONS IN LOCAL PLANTS

#### LABOR'S ROLE

The man on the job or at the machine is usually best informed as to its dangers. Union members should be continually alert to uncover work hazards in their plants and shops.

To assist members in spotting hazards, local unions should have key men, such as shop stewards, trained in the basic methods of industrial safety. With such training these men will be more alert to hazardous conditions and will have some idea of the type of action needed to remedy the condition. They can call to the attention of management both the hazard and the suggested remedy either directly or through a procedure established by collective agreement.

#### HOW TO GO ABOUT THE JOB

In plants which have no organized safety program, the special agents of the Department of Labor are interested in learning of the existence of actual or potential hazards, so that they may assist in calling them to the attention of management and in obtaining effective action.

The Department of Labor's National Committee can also help unions to give their key men the basic training needed to play a leading part

in safety. The Department, jointly with the United States Office of Education, is sponsoring safety training courses conducted by local engineering colleges in war-production centers.

*The courses* consist of 96 hours of instruction and related work usually given in two 3-hour sessions each week over a period of 1 weeks. The United States Office of Education defrays all costs, other than the nominal charge for text material.

*The classes* are usually held in locations convenient to workers in war plants.

*The instructors* are experts in industrial safety, in many cases serving also as special agents of the Committee in its direct contact with war plants.

*Entrance requirements* are decided by the local college. Since the course is intended for practical men in production jobs, the educational requirement is usually limited to a high school education or its equivalent in shop experience.

*Information* on how to apply for these courses may be obtained by writing either to the National Committee for the Conservation of Manpower in War Industries, Division of Labor Standards, U. S. Department of Labor, Washington, D. C., or to a regional safety consultant of the Committee. A map of the Committee's regions, together with the names and addresses of regional consultants is listed on the back cover.

## CHECKING ON POTENTIAL HAZARDS IN NEW PROCESSES

### LABOR'S ROLE

The war has brought to industry many new substances and processes. Workers usually are the first to know when such developments lead to industrial disease.

Labor has a responsibility to bring such symptoms to the attention of experts who can give technical assistance in preventing the disease.

### HOW TO GO ABOUT THE JOB

The Department of Labor through its Division of Labor Standards can provide unions with the free consultant services of some of the country's foremost industrial hygienists to help in solving industrial disease problems. These experts may be able to give the assistance needed from information already in existence. If no body of knowledge exists on the subject, an original study may be undertaken for use by the union which made the request and by labor and management in other plants facing the same problem.

Here is how the Department of Labor, at union request, is helping to prevent disease in the synthetic rubber industry, which produces such important war accessories as barrage balloons and self-sealing gasoline tanks.

This industry has had to find substitutes for toluol, now limited to the manufacture of munitions. Toluol substitutes, particularly benzol, caused death and disease early in 1942 in a number of plants processing synthetic rubber. Complaints began coming in to Washington from local unions in various parts of the country. Apprehension among the workers in one Akron plant resulted in an appeal for immediate action to the War Production Board.

The War Production Board called upon the Department of Labor to handle the job. Union, management, and Government representatives, as



well as industrial hygienists and physicians of national repute were called together. This group visited plants and surveyed conditions where the hazards existed. Their work had the immediate effect of dispelling fear and furthering the correction of hazards.

This group has laid the ground work for a series of publications devoted to brief and practical treatment of each of the various health hazards involved in the fabrication of synthetic rubber articles and the means of controlling these hazards. The final result of the work will be the reduction of the hazards to which workers in one important war industry are exposed.

Another example of this type of service is to be found in the Labor Standards Division's Special Bulletin No. 5 *Control of Welding Hazards in Defense Industries*. Early in 1941 the National Committee received a request from the boilermakers' union for an analysis of welding hazards and suggestions concerning their effective control. The bulletin on the control of welding hazards represents the response to this request. It is largely the work of Mr. Drinker of Harvard, supplemented by assistance by safety experts of the Division and a survey of disabilities and deaths among welders conducted by the union. The publication has been widely used by the union, by special agents of the committee in plants employing welders, and by vocational schools training welders.

#### FORMATION OF SAFETY COMMITTEES

Plant, departmental, and shop safety committees are a common part of industrial safety organization. They have always proved most effective when workers are represented. Advocacy of safety committees representing labor and management is one of the most important steps that can be taken by a union which has not already done so to further the safety of its members on the job.

The Department of Labor can provide, for the guidance of unions, examples of how joint safety committees have been set up and are functioning effectively.

#### SAFETY CLAUSES IN BARGAINING AGREEMENTS

Safety clauses in union contracts can be very useful in improving plant working conditions. While many union contracts include references to safety, few of them at present contain effective safety clauses. Unions should move now to provide in their agreements for joint safety committees and the machinery to correct specific plant safety and health hazards.

Experts available through the Department of Labor will be glad to help unions in analyzing industry hazards.

#### STRENGTHENING STATE SAFETY LAWS AND THEIR ENFORCEMENT

Labor's efforts have put State safety laws on the statute books for the protection of workers. Labor should study the quality of these laws and of their enforcement.

The Department of Labor is prepared to help unions in analyzing the effectiveness of legislation, rules, and inspection, and in improving them to conform to recognized standards.

## PUBLICATIONS OF SPECIAL INTEREST TO LABOR

**Labor and Safety on the Job**  
*in National Defense*

United States Department of Labor  
Division of Labor Standards  
1940

11

**What Unions Can Do**

The foregoing pages contain some of the many things that the individual worker can do in order to prevent accidents. Workers acting together through their labor organizations can carry on further safety activities. Some of these are given below:

1. Each local should have a safety committee to protect the worker on the job. If more than one plant is covered by the local, there should be a committee or at least a safety committeeman in each plant and on each shift.

2. Each union should build up its fund of safety knowledge, so that it can furnish its members with information as to work conditions that may cause injury or health impairment and on the methods of preventing such injury. If you need more information on particular industrial, safety, or health problems, write the Division of Labor Standards, United States Department of Labor, Washington.

3. Each union, through close cooperation with the State labor and inspection departments can help bring about safer working conditions.

4. In negotiating union agreements each local can play an important part in safety through including in the agreement definite provisions as to safe and healthful working conditions to be provided by the employer.



The Department of Labor's Division of Labor Standards has published this 12-page booklet especially for distribution through unions. It contains 6 pages of tips to workers on how to work safely and one page is devoted to "What Unions Can Do."

For information and assistance in working out procedures, the research and consultant facilities of the Department of Labor are available.

### OCCUPATIONAL DISEASE LEAFLETS

This series of leaflets, most of them only four pages, is designed to acquaint workers with health hazards connected with various types of industrial processes. Each leaflet takes up the following items in connection with a specific occupational disease or poisoning:

1. The types of work at which men are exposed to the disease or poison.
2. How the disease or poison occurs.
3. Warning signs - symptoms of the disease.
4. Remedial action to be taken when the warning signs appear.
5. What management can do to prevent the disease.
6. What workers can do to prevent the disease.

There are 20 leaflets in the series, with more to be added in the future. The series is known as the "Industrial Health Series." The leaflets, with their identifying numbers and titles are:

1. Industrial Skin Diseases (Dermatoses)
2. Anthraco-Silicosis
3. Arsenic Poisoning
4. Carbon Monoxide Poisoning
5. Chromium Poisoning
6. Mercury Poisoning
7. Lead Poisoning
8. Benzol (Benzene) Poisoning
9. Silicosis
10. Wood Alcohol Poisoning
11. Chlorinated Solvents
12. Carbon Bisulphide Poisoning
13. Carbon Dioxide Asphyxiation
14. Nitrous Fumes Poisoning
15. Metal Fume Fever
16. Ammonia Poisoning
17. Manganese Poisoning
18. Injury from Acids and Alkalies
19. Hydrogen Sulphide Poisoning
20. Anthrax

The first leaflet in the series is reproduced on the opposite page.

### Occupational Diseases Cause Human Waste

## THE CAUSES AND PREVENTION OF INDUSTRIAL SKIN DISEASES (Dermatoses)

INDUSTRIAL HEALTH SERIES  
No. 1



Division of Labor Standards  
U. S. Department of Labor  
1939

### WHAT TO DO ABOUT IT

On any sign of skin disorder, no matter how slight it seems, consult a doctor. Do not attempt to treat yourself; to do so may make matters worse and require a longer time to heal. Cases should be reported to the State labor department so that conditions may be corrected to protect other workers.

Remember that *early* discovery and *early* treatment make for a shorter and more curable sickness. Late or neglected skin disease may develop into a dangerous illness with much unnecessary discomfort. **DON'T WAIT UNTIL THE DAMAGE IS DONE!**

### PREVENTION

#### *It Is Recommended that Employers Should—*

1. Reduce contacts or irritants to the skin of workers as far as possible.
2. Eliminate dust by effective exhaust ventilation at the points of origin.
3. Have a physician perform patch tests on workers before allowing them to use potentially irritating substances. Sensitive workers should be placed at other work.
4. Constantly and continually emphasize personal cleanliness to the workers. Provide adequate washing and bathing facilities and individual lockers. Encourage change of clothes for work. Education in cleanliness prevents many unnecessary cases.
5. Provide gloves, aprons, boots, and other protective equipment when it is feasible to use them.
6. Instruct workers in hazards of the substances handled.
7. Obtain medical and chemical advice on the best protective measures (such as ointments, etc.) for specific irritants and see that they are used.

(3)

### INDUSTRIAL SOURCES

Skin diseases resulting from industrial exposure may occur in almost any field of work. Any foreign substance can be irritating if it is in continuous contact with the skin. Skin irritations most frequently result from poisonous or irritating chemicals, greases, heat, cold, dust, friction, plants, and infections.

### HOW SKIN DISEASES OCCUR

1. Oil and grease may injure the skin by blocking the pores and hair follicles and introducing infection therein.
2. Chemical irritants or caustic agents may harm the skin directly.
3. Substances, such as naphtha, petroleum, or benzol, that dissolve and remove the natural oil of the skin, are injurious.
4. Infections of the skin may arise from hides, wastes, and other materials containing disease-producing germs.
5. Scratching, brushing, or constant rubbing of the skin injures it and opens the way for infection.
6. There are great differences between people: in some the skin is easily irritated by contacts quite harmless to others.

### WARNING SIGNS OF INDUSTRIAL SKIN DISEASE

These are so varied that it is impossible to list them all. Early irritations are usually shown by a little reddening of the skin, with itching and burning. Blisters, swellings, and frequent boils may be the first signs of industrial skin disease. These signs are usually limited to exposed parts of the skin.

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(2)

### *It Is Recommended that Workers Should—*

1. Keep the skin as clean as possible.
2. Remove oils and greases with thorough washing.
3. Avoid unnecessary contact with irritating substances and solvents which remove the natural oil of the skin.
4. Avoid self-treatment. See a doctor, for each case requires different treatment.
5. Apply for first aid for any cut or break in the skin, no matter how slight.
6. Report any skin symptoms promptly.
7. Wear gloves, aprons, and other protective equipment provided. Use protective ointments supplied.
8. Remember that cleanliness is one of the best safeguards against infection of the skin.

### Industrial Health Is Your Problem

Apply These Principles For Safety

U. S. GOVERNMENT PRINTING OFFICE: 1939

For sale by the Superintendent of Documents, Washington, D. C.  
Price 5 cents

(4)



## HOW TO SECURE THESE SERVICES AND PUBLICATIONS

The technical services that the Department of Labor offers through its Division of Labor Standards, the National Committee for the Conservation of Manpower in War Industries, and its country-wide organization of top-flight safety men furnishes local unions an unequalled opportunity for developing sound safety programs of their own. Through these programs unions help their members by protecting their lives, limbs, health, and earning capacity. Through them, too, unions can render great wartime service to their country, by helping to hold down the loss of skilled manpower, time, and materials caused by industrial accidents. The need for this service is imperative now. Its value will far outlast the present emergency.

To secure further information, publications, or direct service, get in touch with (1) the Division of Labor Standards, U. S. Department of Labor, Washington, D. C., (2) any one of the six labor representatives of the National Committee listed on the inside front cover; or (3) the regional safety consultant in your own section of the country, whose name and address appears on the back cover.

## SAFETY YARDSTICKS

Here are two yardsticks to measure the accident record of your plant: accident frequency and accident severity. Accident frequency indicates the number of disabling injuries per million man-hours of exposure. Accident severity measures the number of days lost per thousand man-hours of exposure.

Does management in your plant compute accident frequency and accident severity? If so, you can tell how your plant measures up to others in your industry. Listed below are frequency and severity rates in various industrial classifications based upon reports of members of the National Safety Council during 1941. They represent somewhat better than the general average experience of American industry.

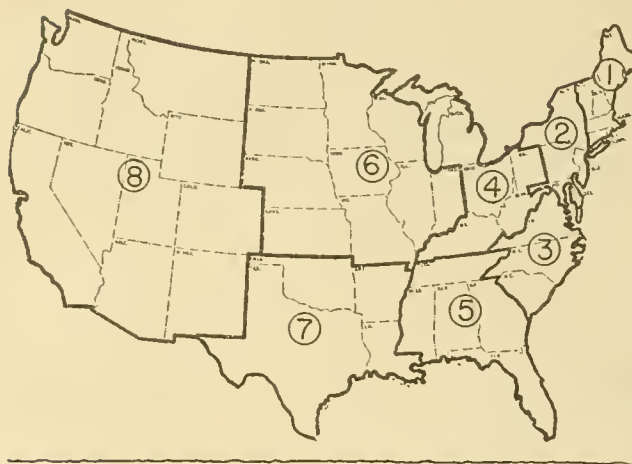
1941

<u>FREQUENCY</u>		<u>SEVERITY</u>	
Disabling Injuries		Days Lost Per	
<u>Per 1,000,000 Man-Hours</u>		<u>1,000 Man-Hours</u>	
Tobacco	3.23	.20	Tobacco
Cement	5.99	.30	Aeronautics
Steel	7.02	.35	Printing and Publishing
Glass	7.37	.50	Glass
Aeronautics	7.40	.53	Textile
Automobile	7.49	.62	Rubber
Rubber	8.10	.64	Automobile
Chemical	9.48	.79	Machinery
Laundry	9.79	.82	Tanning and Leather
Printing and Publishing	9.87	.83	Sheet Metal
Textile	10.23	1.04	Woodwork
Machinery	10.66	1.15	Laundry
Petroleum	11.78	1.16	Transit
Public Utility	12.70	1.30	Food
Nonferrous Metals	13.17	1.30	Chemical
Sheet Metal	14.37	1.30	Metal Products
Transit	14.99	1.33	Clay Products
All Industries	15.39	1.33	Foundry
Meat Packing	15.70	1.42	Meat Packing
Tanning and Leather	15.88	1.44	Petroleum
Food	16.16	1.53	All Industries
Metal Products	16.61	1.61	Marine
Paper and Pulp	17.37	1.63	Nonferrous Metals
Quarry	17.96	1.66	Public Utility
Foundry	21.27	1.66	Paper and Pulp
Woodworking	22.44	1.75	Steel
Marine	22.82	1.92	Refrigeration
Construction	27.11	2.22	Cement
Clay Products	30.82	2.42	Construction
Refrigeration	37.59	3.71	Quarry
Mining	38.90	5.19	Lumbering
Lumbering	52.45	9.42	Mining



## REGIONAL MAP

National Committee for Conservation of Manpower  
in War Industries



## REGIONAL CONSULTANTS

## Region

1. John W. Welch, 80 Federal St., Boston, Mass.
2. James G. Aldrich, 350 Madison Ave., New York City.
3. William G. Marks, 12 Ham Bldg., Greensboro, N. C.
4. Milton W. Bowman, 207 Republic Bldg., Cleveland, Ohio.
5. James M. Cobb, c/o John D. Petree, Alabama Department of Industrial Relations, Montgomery, Ala.
6. John M. Sandel, Rm. 620, 220 S. State St., Chicago, Ill.
7. Rufus W. Owen, 300 Keller Bldg., Houston, Tex.
8. Royal H. Ivory, 200 Bush St., Rm. 1009, San Francisco, Calif.